

# BUILDING A FOREIGN EXCHANGE POLICY

# ABOUT EXPORT DEVELOPMENT CANADA

## WHO ARE WE?

We are Canada's export credit agency. Our job is to support and develop Canada's export trade by helping Canadian companies respond to international business opportunities. We are a self-financing Crown corporation that operates at arm's length from the government.

## WHAT DO WE DO?

We provide insurance and financial services, bonding products and small business solutions to Canadian exporters and investors and their international buyers. We also support Canadian direct investment abroad and investment into Canada. Much of our business is done in partnership with other financial institutions and through collaboration with the government of Canada.

## HOW WE OPERATE

We are financially self-sufficient and operate much like a commercial institution. We collect interest on our loans and premiums on our insurance products. We also have a treasury department that sells bonds and raises money in global capital markets.

We are committed to the principles of corporate social responsibility. Our rigorous due diligence requirements ensure that all projects and transactions we support are financially, environmentally and socially responsible. We believe that good business – adopting and embracing these principles while we facilitate trade for Canadian investors and exporters – is good for business.

## PARTNERSHIP PREFERRED PHILOSOPHY

When we work on a transaction, we prefer to do it in explicit partnership with the private sector. We let the private sector player set the terms and we add capacity and share the risk.

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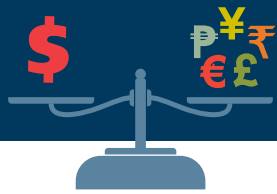
# INTRODUCTION

Volatile exchange rates can pose substantial risks to a business's cash flow, profitability and competitiveness. This guide offers Canadian exporters information that they may wish to consider in order to develop a basic foreign exchange (FX) policy. The process of developing an FX policy can help companies identify when their FX exposure arises and quantify its potential financial impacts. This insight can then be used to craft an FX risk management program tailored to the company's needs and circumstances.

*Foreign Exchange Risk Management* is intended both for companies with some experience in dealing with foreign exchange and for businesses that have no such experience. It is written from the perspective of an exporting business, but its principles apply equally to a company that primarily imports goods and services.

The French original of this publication was prepared by Norman Faubert of the firm Options Devises in collaboration with EDC's Corporate Research Department.

This guide is presented for informational purposes only and should not be relied upon as the sole factor to consider in connection with how to identify, measure, manage or otherwise deal with foreign exchange risk. In providing this guide, EDC does not in any way assume any part of the reader's management of foreign exchange risk, does not guarantee, represent or warrant the accuracy, completeness, or timeliness of the information provided, and shall not be liable for any loss or injury whatsoever resulting from the reader's use of or reliance on this guide or from the management of its foreign exchange risk. Nothing in this guide is intended to provide financial, legal, accounting or tax advice and no action or decision should be taken without independent research and professional advice.



# CHAPTER 1: UNDERSTANDING FOREIGN EXCHANGE RISK

During the past few years, Canadian exporters have faced major challenges that include falling demand in the United States, intensifying competition abroad and a steadily appreciating Canadian dollar. Many of these companies have found ways to counter the rising value of the Canadian dollar and lessen the resulting risks to their competitiveness. Some have dealt with the appreciation of the dollar so effectively that they have not only maintained international demand for their products and services, but have actually increased it. (See [How Canadian Exporters Are Adapting to a Strong Canadian Dollar](#).)



There is a second currency-related risk that threatens Canadian companies' profit margins and that occurs not only when the Canadian dollar is strong but also when it is weak. This is Foreign Exchange (FX) risk, which stems from exchange rate volatility, and many Canadian exporters are not managing this risk as well as they could. If your company falls into this category, you may be missing out on an important benefit, since effective FX risk management can improve your competitiveness by increasing the predictability of your profits and cash flow.

## FX RISK MANAGEMENT IS OFTEN NEGLECTED

Canadian exporters are aware of FX risk and generally agree that FX fluctuations can sharply reduce their international profit margins. But there is no unanimity on how to deal with the issue. For most other types of risks (for example, the risk of fire), companies obtain

appropriate insurance coverage almost automatically, but a survey conducted by EDC shows that few Canadian companies manage FX risk in a structured way. This can be an ill-advised approach in a global business environment where FX volatility is a given and where opportunities to generate revenue abroad are greater than ever.



## THE BASICS OF FX RISK MANAGEMENT

There is no sense in denying that proper FX risk management can be a demanding undertaking. In fact, many exporters don't engage in FX risk management because they perceive it as too demanding or too complex a task. This perception leads some companies to decide that managing this type of risk isn't cost-effective, and that FX losses must simply be written off as the price of doing business abroad. Even when businesses do recognize the need for FX risk management, they often limit their approach to the occasional use of FX forward contracts. These contracts may be purchased even when a detailed analysis of a company's FX exposure and the sensitivity of its profits to exchange rate movements has not been performed, and this can diminish the effectiveness of such contracts.

That said, effective FX risk management is within the reach of all exporters. To successfully mitigate FX risk, exporters should start by concentrating their analysis on their business operations. By operations, we are referring to all the tasks that must be completed throughout your business to manufacture and sell a product abroad and make a profit. (See [The operating cycle](#) of this Guide for more details.)



## FX RISK AND YOUR OPERATIONS

Your company's unique set of operations is where you should focus your analysis in order to understand how the exchange rate threatens your profitability. Your greatest source of cash flow comes from operations. Accordingly, FX risk management, which above all consists of understanding, measuring and mitigating the impact of exchange rate fluctuations on profits, should be based primarily on them.

Instead of doing so, too many exporters give priority to issues like following FX markets and the selection of FX hedging instruments. These matters are important, but they should come at the end of a risk management process that includes a number of distinct steps, which we present in this guide.

## IDENTIFYING THE FINANCIAL CONSEQUENCES OF EXCHANGE RATE VOLATILITY

Many exporters struggle when the time comes to clearly identify their FX losses. As a result, these losses frequently remain undetected even when they cause profits to fall. If your business is in this position, even your financial statements may not reveal the true effects of FX fluctuations on your profit margins. So, how are you supposed to make head or tail out of this?

The solution does not need to be overly complicated. It requires that you define the key parameters that will allow for the proper identification, measurement and management of your company's FX risk. Defining these parameters, by focusing on your operations, will allow for the development of a basic FX policy that reflects your business's needs.



The next section compares the management of FX risk with that of another type of risk, fire. Immediately after, we present the four key parameters of FX risk management.

### FX RISK COMPARED TO THE RISK OF FIRE

FX risk has unique characteristics. To better understand them, let's answer two basic questions, first related to the risk of fire and then to FX risk.

- ▶ When should a company insure its facilities against fire?

Appropriate coverage should be in place right from the time the risk appears – that is, from the time the ownership of a property is transferred or, in the case of a rental, when a lease becomes effective. It is difficult to imagine a business deciding to delay the purchase of fire insurance or not to fully cover this risk once it becomes its responsibility. Furthermore, a business should be insured against fire at all times. To ensure that this is the case, insurance coverage is usually renewed automatically upon expiry.

- ▶ How much fire insurance coverage is necessary?

The amount of coverage is normally based on the replacement cost of the building and equipment. It is usually easy to obtain a professional estimate of replacement cost for a building and equipment in order to determine the required amount of insurance coverage.

Now let's consider these same questions in connection with FX risk:

- ▶ When should a company seek to cover (or hedge) its FX risk?

Just as with the risk of fire, a company needs to take FX risk into account from the moment it appears. However, FX risk can arise at different points in time from one company to another, based on when selling prices for foreign buyers are set. As well, and contrary to the common practice for insuring against the risk of fire, coverage for FX risk does not need to be in place at all times, nor does it need to be renewed automatically upon expiry.

- ▶ How much coverage is necessary?

This can vary considerably based on a business's risk tolerance and the nature of its operations. For example, a company that makes a limited use of imported inputs is likely to require more coverage than a firm that has the same export earnings but purchases many parts and components from foreign suppliers.

As can be seen, protecting against FX risk is not as simple as covering other forms of risk. Moreover, there are no clear management standards or common approaches to help exporters manage FX risk. You should therefore aim to take responsibility for determining the risk management parameters that are most appropriate for your company.



## THE FOUR BASIC PARAMETERS OF FX RISK MANAGEMENT

In order to develop a game plan that is effective in helping you protect your profits from FX risk, you need to define the following four parameters:

1. your reference rate of exchange;
2. your time horizon;
3. your FX position; and
4. your hedging strategy.

We'll look at the reference rate of exchange in the remainder of this chapter. Chapter 2 will cover the time horizon and the FX position, and Chapter 3 will examine the hedging strategy.

### PARAMETER 1: THE REFERENCE RATE OF EXCHANGE

FX risk is present from the moment you establish the selling price of the goods or services you'll export. The rate of exchange you use to calculate this price is the first of our four risk parameters. It is called the *reference rate of exchange* or, more simply, the reference rate.

For example, consider a fictional Canadian company called BEDM Systems Inc. (BEDM), which has customers in the United States. It manufactures and exports a

product that has to bring in CAD 100.00 per unit in order to make a sufficient profit.

Suppose also that the rate of exchange is USD/CAD 1.0525 at the time BEDM calculates its export price.<sup>1</sup> In this case, the product's unit selling price in the U.S. should be USD 95.00 ( $1.0525 \times \text{USD } 95.00 = \text{CAD } 100.00$ ). In other words, for BEDM to achieve its desired profit, each dollar of U.S. revenue must be converted to 1.0525 Canadian dollars. The reference rate is thus USD/CAD 1.0525.

If BEDM sells its U.S. dollars at a rate that is *less* than the reference rate, its profit margin will be lower than expected and it will suffer an FX loss.<sup>2</sup> Conversely, if the exchange rate at which the company sells its U.S. dollars is *more* than the reference rate, BEDM's profit margin will increase and it will generate an FX gain.

### SELECTING THE REFERENCE RATE

The reference rate must reflect the market exchange rate in effect when you calculate your selling price in a foreign currency. The reason for this is that if you want to effectively mitigate all or most of your FX risk by purchasing FX hedging instruments, you should do so when the actual market rate of exchange is at or very close to the reference rate. This point in time coincides with the moment when you set prices for foreign buyers.

<sup>1</sup> The rate of exchange is conventionally stated as the quantity of the currency in the denominator relative to one unit of the currency in the numerator. USD/CAD 1.0525 thus means that one U.S. dollar is worth CAD 1.0525.

<sup>2</sup> This FX loss is an actual loss that will negatively impact cash flow. It shouldn't be confused with FX losses as they are calculated for financial reporting purposes. The same holds for FX gains. Section 1.9 provides more details on this point.





## THE REFERENCE RATE OF EXCHANGE AND FX RISK

The concept of reference rate of exchange enables us to more clearly define what FX risk is: it is the possibility that at the time foreign revenues are converted into Canadian dollars by an exporter, the market rate of exchange is less favourable than the reference rate that was used to set the export prices.

The concept of reference rate is found in all export markets. For example, if BEDM sells the same product in Spain for EUR 77.00, the reference rate is then EUR/CAD 1.2987, since  $\text{EUR } 77.00 \times 1.2987 = \text{CAD } 100.00$ .

## MEASURING FX RISK

To illustrate how to measure FX risk, we'll return to the example of BEDM. The company is aiming for a gross margin of 30% on each unit sold, and its revenue and margin figures are as follows:

|                                  |          |
|----------------------------------|----------|
| ▶ Selling price (USD)            | \$95.00  |
| ▶ Expected revenue (CAD)         | \$100.00 |
| ▶ Anticipated gross margin       | 30%      |
| ▶ Anticipated gross margin (CAD) | \$23.08  |
| ▶ Unit cost (CAD)                | \$76.92  |

Using this information, we can analyze the sensitivity of BEDM's profit margins to exchange rate fluctuations, as shown in Table 1.

## WHEN SHOULD YOU CHANGE THE REFERENCE RATE?

You shouldn't change the reference rate unless you decide to move your export price either upward or downward. We will see in section 2.2 that BEDM's sales price of USD 95.00 is valid for a 12-month period and, therefore, that its reference rate is also valid for one year.

In contrast, if you have the ability to regularly adjust your price lists or to calculate a different selling price for every order, this lessens your FX risk since these prices will normally be based on a new reference rate.

A final note: the reference rate should not be confused with the rate of exchange used for accounting purposes. The latter rate pertains to financial statements and may be updated regularly, whereas the reference rate is used to manage FX risk and can remain fixed for an extended period of time.



Table 1. Sensitivity of BEDM's Profit Margin to Exchange Rate Fluctuations

| USD/CAD Exchange Rate | Unit Price in USD | Revenue in CAD  | FX Gain/Loss in CAD | Profit Margin in CAD | Profit Margin in % | Variation in Rate of Exchange (%) | Variation in Profit Margin (%) |
|-----------------------|-------------------|-----------------|---------------------|----------------------|--------------------|-----------------------------------|--------------------------------|
| 1.1600                | \$95.00           | \$110.20        | \$10.20             | \$33.28              | 43.3               | 10.2                              | 44.3                           |
| 1.1200                | \$95.00           | \$106.40        | \$6.40              | \$29.48              | 38.3               | 6.4                               | 27.7                           |
| 1.0800                | \$95.00           | \$102.60        | \$2.60              | \$25.68              | 33.4               | 2.6                               | 11.3                           |
| <b>1.0525</b>         | <b>\$95.00</b>    | <b>\$100.00</b> | <b>\$0.00</b>       | <b>\$23.08</b>       | <b>30.0</b>        | <b>0.0</b>                        | <b>0.0</b>                     |
| 1.0400                | \$95.00           | \$98.80         | (\$1.20)            | \$21.88              | 28.5               | -1.2                              | -5.0                           |
| 1.0000                | \$95.00           | \$95.00         | (\$5.00)            | \$18.08              | 23.5               | -5.0                              | -21.7                          |
| 0.9600                | \$95.00           | \$91.20         | (\$8.80)            | \$14.28              | 18.6               | -8.8                              | -38.0                          |
| 0.9200                | \$95.00           | \$87.40         | (\$12.60)           | \$10.48              | 13.6               | -12.6                             | -54.7                          |

As the bottom row of the table shows, an unfavourable change of 12.6% in the USD/CAD exchange rate (from 1.0525 to 0.9200) causes a 54.7% deterioration in BEDM's profit margin, which drops from CAD 23.08 per unit to CAD 10.48 per unit. The other rows of the table show how the profit margin changes as the exchange rate varies from 1.1600 to 0.9200.

This analysis has been simplified by dealing with a single product, by generating all revenues in USD and by having all unit costs in CAD. The real-world analysis of FX risk for most companies is considerably more complicated, since it involves many different products and revenues and expenditures in various currencies.

This should not, however, prevent your company from carrying out the more complex analyses that will measure the sensitivity of your profit margins to exchange rate fluctuations. To do so, you'll need to prepare a different table for each of the currencies in which you earn revenue. Then you must calculate your FX gains and losses, as well as your profit margin, by factoring in the impact of exchange rate fluctuations on the portion of your unit costs that are payable in foreign currency.



## TRYING TO GAIN FROM EXCHANGE RATE FLUCTUATIONS

As illustrated by Table 1, BEDM's profits improve if the U.S. dollar appreciates, but fall if the U.S. dollar weakens. This demonstrates that, although it's possible for an exporter to gain financially from favourable exchange rate fluctuations, trying to do so isn't necessarily a good idea, for the following reasons:

- ▶ This opportunity is in fact a zero-sum game in which each dollar of potential gain is offset by a dollar of potential loss.
- ▶ This opportunity is purely speculative. In addition, when FX exposure is left uncovered, an exporter loses its ability to control FX risk.
- ▶ The likelihood of realizing an FX gain will never exceed 50%.
- ▶ Even professional currency traders are not able to consistently predict how exchange rates will vary over time.

If, notwithstanding the above, you still want to try to take advantage of favourable exchange rate movements, it is imperative that you measure the financial consequences for your business if the rate moves against you.

## THE RELIABILITY OF EXCHANGE RATE FORECASTS

Exchange rate forecasts are commonly available from banks, FX brokers and online sources. Some forecasts are more general and deal with the long term, while others are very specific and look at the immediate future. The type of analysis used to produce these forecasts usually falls into one of two categories. *Fundamental* analyses are based on economic parameters such as gross domestic product, unemployment, inflation and interest rates. *Technical* analyses are based on the study of the past evolution of exchange rates.

Most exchange rate forecasts are well documented and rigorous. However, all of them are based on hypotheses that may turn out to be inaccurate. Even experts are unable to predict, on a regular basis, how exchange rates will evolve in the short, medium and long terms. Basing decisions about FX risk management on such predictions can thus be a source of additional risk for your company. This risk should never be accepted unless the financial ability of your business to withstand a possible deterioration of its cash flow and profit margin due to exchange rate movements has been clearly established.



## REACTING TO STRONG MOVEMENTS IN EXCHANGE RATES

Exchange rates always fluctuate. Most of the time, they do so within a range that will be narrow or wide depending on market conditions. At other times, however, exchange rates can rapidly move outside their range and reach unexpected levels. What should you do in these situations?

### FAVOURABLE MOVEMENTS IN THE EXCHANGE RATE

This corresponds to the *appreciation* of the currency in which you collect your export revenues. If you have no FX risk protection in place and this happens, your profit margin and earnings will rise. But if you have FX coverage, you will not be able to take advantage of the appreciating foreign currency, or may only be able to partly benefit, depending on how much of your FX risk is hedged. When this happens, it may be tempting to conclude that your current approach to FX risk management is damaging your profitability. Such a conclusion overlooks the fact that these increased earnings would have resulted from speculation, which is risky.

That said, if the currency of your export market appreciates strongly, you should focus on the opportunities this spells for your company instead. The most obvious is the potential for higher margins on future sales. Just as important are the opportunities that the new

exchange rate creates for reviewing your business strategy, adjusting your export selling prices, acquiring new clients and stimulating demand for your product.

### UNFAVOURABLE MOVEMENTS IN THE EXCHANGE RATE

This is the *depreciation* of the currency in which you collect your export revenues. Since 2003, Canadian exporters have regularly faced this situation with respect to the USD/CAD rate of exchange. If you have no FX risk coverage and this happens, your earnings will fall. If you do have FX coverage, on the other hand, a depreciating foreign currency won't hurt you as much. However, even with FX risk coverage in place, the depreciation will still likely threaten your future sales, profit margins and business development in all the export markets where you are paid in this currency.

After a foreign currency has depreciated for a time, it may be tempting to believe that it will go no farther and that the worst is over. This can lead you to assume that FX risk management is now less critical for sales that are paid in that currency. Unfortunately, the foreign exchange market is just as unpredictable as other financial markets. Not taking action because you think a currency has finished depreciating is akin to speculating. Unless you continue to pay attention to FX risk, any further depreciation in the value of the foreign currency will damage your margins and cash flow.



## ACCOUNTING TREATMENT OF FX GAINS AND LOSSES

The information about FX gains or losses that is found in a company's financial statements is often misinterpreted. This information is used to adjust certain accounting discrepancies, but it indicates nothing about how well or badly a company is doing in managing FX risk, and nothing about the actual impact of exchange rate fluctuations on profitability and cash flow. This impact, as we have seen, results from converting foreign currency into Canadian dollars at an exchange rate that is different from the reference rate.

It is necessary, therefore, to distinguish between accounting information and true financial repercussions. Just as net profit and operating cash flow are two different things, the FX gains and losses that appear on financial statements are different from the amounts that the business has actually gained or lost due to exchange rate fluctuations. As a result, using your financial statements to measure and assess the effects of exchange rate movements on your business is a mistake. Many exporters make this error, which prevents them from making the connection between falling profit margins and exchange rate changes.

Let's look again at Table 1. The amounts in the "FX gain/loss in CAD" column measure the true financial consequences of exchange rate movements on the value of foreign revenues in CAD. These are actual gains and/or losses that directly affect cash flow, but

they will not be identified as such in financial statements. You can only find them by conducting a separate analysis based on the expected and actual cash flows tied to your foreign sales.

Some managers have difficulty ignoring accounting information. Yet companies do not run their businesses for the purpose of producing financial statements. They do so to make a profit by generating positive cash flows from their operations. FX risk management is a continuous process that stems from these operations, while financial statements are static and don't fully reflect the operational characteristics that make each exporting company unique.

### SUMMARY

While it is possible to measure FX risk exposure and mitigate its financial consequences, exporters are often unsure how to do this, or not sure they need to do it at all. If an important piece of equipment in your plant is destroyed by fire, the results – in the form of interrupted operations, loss of profits and other financial impacts – are immediately evident and can easily be measured.

But when profit margins fall because of exchange rate changes, the indicators are not nearly so obvious. You may spend money and time looking for the origins of the problem in the wrong places, by dissecting production costs for example, when a basic FX risk management program would have quickly helped identify what was going wrong.



## CHAPTER 2: MEASURING YOUR EXPOSURE TO FX RISK

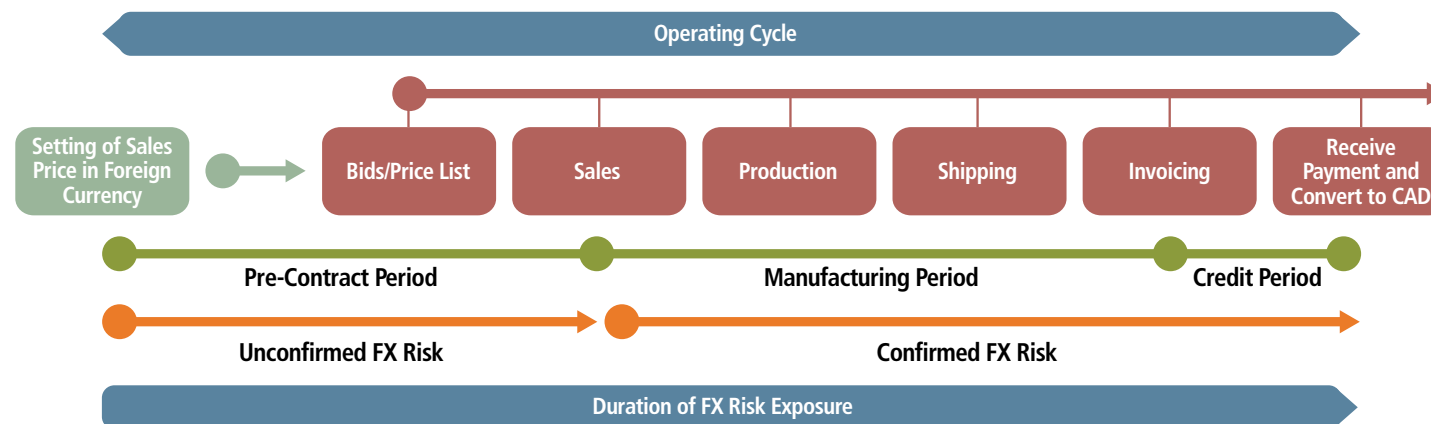
The previous chapter defined what FX risk is, when it appears and how you can calculate the sensitivity of your profit margins to exchange rate fluctuations. This chapter will examine how to calculate exposure to FX risk and will cover the time horizon parameter and the FX position parameter.

In theory, the amount of exposure to FX risk can be calculated by multiplying the export selling price by the number of units sold. However, for many exporters, both pieces of information seldom become available at the same time: export prices are set first, and sales take place after that. But as we will see, there is a way to calculate FX exposure in such circumstances.

### THE OPERATING CYCLE

Every company has an operating cycle made up of recurring operations that are specific to its type of business. During this cycle, the company produces and markets its goods or services, generates cash flows and earns a profit. Chart 1 shows the structure of the operating cycle and the FX risk inherent in it.

Chart 1: **The Operating Cycle and FX Risk**





## CHAPTER 2: MEASURING YOUR EXPOSURE TO FX RISK

Analyzing your operating cycle can help you understand the exact nature of your company's operations and the unique characteristics related to the marketing, sale, production and delivery of your exports. This analysis can also help determine how and where your FX risk appears and for how long it remains present. To illustrate how this works, consider again the example of BEDM Systems. In addition to the data given in Table 1, BEDM's operations also have the following characteristics:

- ▶ Its exports are deliverable from nine to 12 months after it has concluded a sale with a buyer.
- ▶ The invoices it issues are payable no later than 90 days after delivery.

Due to the above, the company's operating cycle can be up to 27 months long, as shown in Chart 2. This means that more than two years can lapse between the time when BEDM sets its reference rate and the moment when it converts U.S. dollars to Canadian dollars. Needless to say, the USD/CAD rate of exchange could move dramatically over this period! When they analyze their operating cycle for the first time, many exporters are surprised by how long they are exposed to FX risk and by the large amount of their FX exposure.

Chart 2: **Analysis of BEDM's Operating Cycle**





## PARAMETER 2: THE TIME HORIZON

The time horizon is the second of the four parameters identified in Chapter 1. It refers to the period during which the company does not change its reference rate (parameter no. 1) and thus commits to an export selling price. The time horizon can vary considerably from one business to another, based on the nature of the goods and services sold as well as a company's marketing strategies.

Some businesses mitigate their FX risk by regularly revising their reference rates and thereby adjusting their export selling prices. This establishes a relatively short time horizon. At the extreme, when a company adjusts its selling price with every order, the time horizon shrinks to zero.

Regardless of the constant volatility of exchange rates, however, most businesses need to honour their export sale prices for at least a period of time. Publishing a price list or submitting a proposal, for example, indicates such a commitment and thus establishes a time horizon. Few companies can make up for FX fluctuations by adjusting their prices during this period.

### UNCONFIRMED FX RISK

Most companies, consequently, find themselves in a situation where FX risk is present even before a single sale is finalized. In this case, FX risk is described as being “unconfirmed.” It will only become a “confirmed” FX risk when a firm sale is completed and the company is assured of receiving, at some point in the future, a payment in a foreign currency.

## THE TIME HORIZON AND THE OPERATING CYCLE – NOT THE SAME THING!

The time horizon and the operating cycle are two different notions. Confusing them can make it difficult for your company to correctly develop and implement its FX risk management policy. Remember that the time horizon corresponds to the period during which the reference rate remains effective. The operating cycle, in contrast, measures the length of time during which the FX risk is present.

Unconfirmed FX risk is a genuine type of risk. You should acknowledge its existence and begin managing it as soon as it appears. The difficulty with this, of course, is that you don't yet know your level of sales and thus the amount of FX risk you're facing.

## MEASURING UNCONFIRMED FX RISK

The importance of measuring unconfirmed FX risk varies according to the situation. Submitting a proposal and establishing a price list are two such situations.

### BIDDING ON A PROJECT

When your company submits a price, in foreign currency, for a project on which it has bid, it is often impossible to determine the percentage likelihood that you'll eventually make the sale. Because of this uncertainty, you can't accurately measure your unconfirmed risk, which makes it hard to manage the FX risk related to this potential sale.





As a solution, you could try to negotiate a risk-sharing provision with your foreign buyer, but buyers are rarely receptive to this approach. Moreover, drafting such a provision at the proposal stage can be quite complex and the results may still not effectively protect your profits.

Another alternative could be to purchase an FX option (described in Section 3.2). FX options possess features that can make them useful for mitigating FX risk when your company bids on a project where payments will be made in a foreign currency. Experience shows, however, that only a limited number of Canadian businesses choose this approach, since FX options are often perceived as expensive. Furthermore, the bidding process regularly extends well beyond the initial deadline, which can make it difficult to select the expiry date for the option.

### PUBLISHING AN EXPORT PRICE LIST

Publishing an export price list implies a commitment by your business to honour its prices within a specific time horizon. Your market studies and sales figures for previous years can help you assess the export sales you are likely to make during this period. With this information in hand, you can measure, with a certain degree of confidence, your exposure to unconfirmed FX risk.

To return to the example of BEDM Systems, suppose the company tells its U.S. customers that its prices are valid for the next 12 months. This means that BEDM now knows its first two FX risk parameters. These are:

- ▶ the reference rate of USD/CAD 1.0525, which was used to calculate the unit selling price of USD 95.00; and
- ▶ the time horizon of 12 months.

To measure its unconfirmed FX risk, BEDM still needs a figure for its potential future sales. Based on previous performance, it estimates that it will sell between 150,000 and 170,000 units in the United States within the 12-month time horizon. The company can now calculate its unconfirmed FX risk as being between USD 14.25 million (USD 95.00 x 150,000) and USD 16.15 million (USD 95.00 x 170,000).

### MANAGING UNCONFIRMED FX RISK

BEDM's management must now decide whether to hedge this unconfirmed risk. If it does so by purchasing one or more FX forward contracts (as described in section 3.2), it is committing to deliver a certain amount of U.S. dollars to its banker or FX broker even though no sales have been completed yet. At first glance, this may seem risky – what if the projected sales never materialize?



To properly understand the implications, let's imagine that BEDM decides to wait until it completes its sales to its U.S. buyers before it buys FX forward contracts. In this case, BEDM remains fully exposed to FX risk for varying periods of time that all have the same starting point (that is, when it sets its prices in U.S. dollars using the reference rate of exchange) and end when each sale to a U.S. buyer is finalized. If the Canadian dollar becomes stronger during any of these time periods, BEDM will suffer FX losses that will lower profit margins and reduce its cash flow in Canadian dollars.

In such situations, your company has two alternatives for dealing with unconfirmed FX risk:

- ▶ you can hedge this risk as soon as it appears, based on a reasonable estimate of your sales over the time horizon; or
- ▶ you can wait until your forecast sales become actual sales before you hedge the risk. This approach exposes you fully to the risk that exchange rate fluctuations during the time when your sales remain unconfirmed will reduce your profit margins and cash flow.

### BEWARE OF OVER-HEDGING

It's important not to overestimate your unconfirmed FX risk and, as a result, hedge more than you really need. This can happen if you purchase FX forward contracts for an amount of foreign currency that exceeds the amount of sales that are completed within the time horizon.

Over-hedging produces a situation where your business, through lack of sales and the resulting shortfall in foreign currency revenues, must buy back some of its FX coverage. Such buybacks will carry a cost if the foreign currency that you had committed to deliver to the bank or FX broker has appreciated against the Canadian dollar. For these reasons, you should try to estimate your expected foreign sales as accurately as you can.

### CONFIRMED FX RISK

Confirmed FX risk is easier to identify, measure and manage than unconfirmed FX risk. This is because, for each foreign currency in which your company makes transactions, you're working with known elements such as:

- ▶ firm purchase or sale orders;
- ▶ accounts receivable;
- ▶ accounts payable;<sup>3</sup>
- ▶ cash on hand; and
- ▶ FX forward contracts.

Unlike unconfirmed FX risk, confirmed FX risk depends on elements you can easily identify and measure. Your estimate of this type of risk, consequently, doesn't depend on assumptions about sales that you may or may not make.

<sup>3</sup> Accounts payable that must be paid in the currency in which some or all of your company's export revenues are collected constitute a form of "natural" hedging. They help reduce your exposure to FX risk by allowing you to use foreign currency earnings to pay invoices issued by foreign suppliers. Doing this means you will have less foreign currency to eventually sell and convert into CAD.



## PARAMETER 3: CALCULATING YOUR FX POSITION

The measurement of both unconfirmed and confirmed FX risk allows you to calculate your business's total exposure to FX risk. This is also known as your *FX position*. A simple way to calculate your FX position is to complete a table such as the one below. You'll need to prepare one such table for each of the foreign currencies in which your business carries out transactions.

Table 2 shows the FX position calculations for BEDM's USD transactions. Note that receipts are on the plus side, while disbursements and FX forward sale contracts are on the minus side. Importantly, currency flows are recorded regardless of their expected collection or disbursement dates.

According to Table 2, BEDM has an overall FX position of USD 12,515,000. This is made up of USD 6,405,000 of confirmed exposure, plus USD 11,510,000 of unconfirmed exposure, minus USD 5,400,000 in FX forward contracts that BEDM is already using to hedge some of its FX risk. Based on this FX position, the positive or negative impact on BEDM's cash flow and profits will be CAD 125,150 for each change in the value of the U.S. dollar of CAD 0.01. In other words, a fluctuation in the USD/CAD rate of exchange of merely one cent will cause the business to gain or lose CAD 125,150.

Table 2. BEDM's FX Position

| Foreign Exchange Position in USD               |                     |
|--|---------------------|
| <b>Confirmed exposure</b>                      |                     |
| Cash   | \$240,000           |
| Accounts receivable                            | \$1,275,000         |
| Firm orders – sales                            | \$6,400,000         |
| Accounts payable                               | (\$210,000)         |
| Firm orders – purchases                        | (\$1,300,000)       |
| Other confirmed receipts                       | \$0                 |
| Other confirmed disbursements                  | (\$0)               |
| Confirmed exposure                             | \$6,405,000         |
| <b>Unconfirmed exposure</b>                    |                     |
| Expected sales                                 | \$14,250,000        |
| Expected purchases                             | (\$2,740,000)       |
| Other expected receipts                        | \$0                 |
| Other expected disbursements                   | (\$0)               |
| Unconfirmed exposure                           | \$11,510,000        |
| Total exposure                                 | \$17,915,000        |
| <b>Foreign exchange contracts</b>              |                     |
| FX forward contracts used to sell U.S. dollars | (\$5,400,000)       |
| <b>Foreign exchange position</b>               | <b>\$12,515,000</b> |



### THE FX POSITION AND FUTURE COLLECTION AND PAYMENT DATES

Exporters often confuse the concept of FX position with that of collection and payment dates (that is, the expected points in time when foreign currency payments will be received or will need to be made). These two matters are important but independent of one another. To calculate your company's FX position, you do not need to know when your foreign clients will pay you or when you will pay your foreign suppliers. It is only at a later stage in the process of managing FX risk that you need to pay attention to the timing of foreign currency receipts and disbursements.

In this regard, it is worth recalling that FX risk appears right at the outset of the operating cycle. It may initially be unconfirmed, which means you have no information about when your foreign buyers will pay you. However, as we have seen, FX risk is present at this point and needs to be included in your FX position.

Once a sale is completed and the FX risk becomes confirmed, a collection date can be anticipated for foreign currency receipts. That date can easily change, however, when customers, due to unforeseen circumstances, pay ahead of time or, as is more often the case, pay later than planned. We'll see how to deal with this in section 3.4. In the meantime, measure your FX exposure by calculating your FX position as best as you can, but without thinking about collection and payment dates.

### MONITORING EXPOSURE TO FX RISK

After your initial FX position has been calculated, you'll need to monitor and update it regularly as your operating cycle proceeds. Updates can be necessary for reasons such as:

- ▶ changes in forecast sales;
- ▶ forecast sales becoming actual sales;
- ▶ unexpected special orders;
- ▶ collection of accounts receivable;
- ▶ payment of accounts payable;
- ▶ putting new FX forward contracts in place; and
- ▶ lapsing of existing FX forward contracts.

Consider again the example of BEDM in Table 2. The conclusion of a firm sale changes unconfirmed FX risk to confirmed FX risk, so the company must update its FX position with this new data. To do so, it increases the confirmed risk by adding the amount of the order to the line item "Firm orders (sales)." It then must reduce its unconfirmed risk by subtracting the amount of the order from line item "Expected sales." Similarly, when BEDM submits an invoice to a buyer, the line item "Accounts receivable" must be adjusted upward by the invoiced amount and the line item "Firm orders (sales)" must be reduced by the invoiced amount.



By keeping the FX position up to date in this way, you can always have at your disposal a relatively precise measure of your FX exposure, along with the components that make up that exposure. With this information in hand, you can ensure that you are maintaining adequate FX risk coverage at all times. We'll discuss how to hedge FX risk in the next chapter.

### ASSIGNING RESPONSIBILITY FOR FX RISK MANAGEMENT

Senior management is ultimately responsible for managing FX risk, and decisions about the company's FX policy should be approved at this level. The manager responsible for FX risk management, whose role places him or her in a position of expert advisor to senior management, must then ensure that the FX policy is well applied. In order to do so, this manager should hold a company position that provides a comprehensive overview of the company's activities. The manager should have the skills and information needed to identify and measure the effects of exchange rate changes on profit margins. This individual should also have a good grasp of FX hedging instruments and of management practices that deal with foreign currencies. Finally, this manager will be responsible for the company's relationships with the bankers and brokers with whom the company carries out its FX transactions.



## CHAPTER 3: HEDGING FX RISK

So far we've examined how and when FX risk appears – that is, from the time the company sets its reference rate of exchange when calculating its export sales prices in a foreign currency. In addition, we've seen that FX risk may be unconfirmed at first, but that it can still be measured based on the exporter's sales forecasts over the time horizon. Finally, we've shown how a company's FX position is composed of confirmed and unconfirmed FX risks. The next step is for the exporter to develop the company's FX hedging strategy, which frequently involves the use of FX hedging instruments sold by banks and FX brokers.

### **PAY ATTENTION TO ALL FOUR FX RISK MANAGEMENT PARAMETERS**

Many exporters neglect the first three parameters of FX risk management. As a result, they may develop their hedging strategy on the basis of an inaccurate measurement of their FX position and without considering their reference rate. Proceeding in this way makes it unlikely that the exporter's FX hedges will be as effective as they could be.

### **PARAMETER 4: DEVELOPING YOUR HEDGING STRATEGY**

Your hedging strategy is the fourth and last parameter of your FX risk management program. Developing this strategy involves:

- ▶ selecting FX hedging instruments;
- ▶ setting a hedging ratio; and
- ▶ choosing hedging techniques.

### **FX HEDGING INSTRUMENTS**

There are two types of hedging instruments in the FX market: FX forward contracts and FX options.

#### **FX FORWARD CONTRACTS**

A FX forward contract is a firm commitment to exchange, on a future date, predetermined amounts of two different currencies. The rate of exchange between these two currencies is guaranteed by the contract. Because of this guarantee, you know in advance how many Canadian dollars you'll receive in exchange for the foreign currency, even if the exchange rate changes over time. FX forward contracts thus protect you against unfavourable FX fluctuations, but they also prevent you from making any financial gains if the exchange rate moves in your favour.

Because the FX forward contract is simple to understand and use and requires no initial cash outlay, it is the hedging instrument most widely used by Canadian exporters.



### FX OPTIONS

Unlike an FX forward contract, an FX option does not commit the option holder to buy or sell a given amount of foreign currency on a specific future date. Instead, it gives the option holder the right (but not the obligation) to do so, at an exchange rate guaranteed in the option contract. The option holder will only exercise this right if it suits his needs and if it is financially beneficial for him to do so (that is, if the exchange rate guaranteed by the option is more favourable than the market rate of exchange).

FX options are therefore highly flexible. They enable the holder to protect against FX risk while retaining the possibility of profiting from favourable movements in the exchange rate. The drawback is that, contrary to FX forward contracts, the holder must pay an upfront premium to purchase the option.

### BUYING AND SELLING FX OPTIONS

FX options can be purchased from, or sold to, a banker or broker. Exporters that seek protection against FX risk will normally buy FX options that give them the right to sell a designated foreign currency. Selling FX options does not protect exporters against FX risk but, instead, provides them with an opportunity to earn a premium up front.

With the exception of the FX forward contract and a few of its variations, all other FX hedging instruments are based on options. Through various combinations of purchases and sales, options are used to create a wide range of hedging products that carry names such as “FX Collar”, “FX Tunnel” and “FX Forward Plus.” Some of these products are even structured so as to require no initial cash outlays.

### FX FACILITIES

The FX forward market exposes the banker or broker to the risk that the exporting company may be unable to honour its contracted FX obligations. If the business defaults in this way, the banker or broker that provided the FX coverage may be exposed to significant financial losses.<sup>4</sup>

Bankers and brokers manage this default risk by granting FX facilities to the exporters they support. An FX facility authorizes the exporter to buy or sell FX forward contracts but imposes limits on the transaction amounts and the due dates for these contracts.

To measure default risk, bankers and brokers usually apply a risk coefficient to the amount of the FX facility. This coefficient generally ranges from 10% to 15% and is based on an assessment of the client’s credit risk and the volatility of currency markets. Multiplying the risk coefficient (such as 15%) by the amount of the FX facility (such as \$500,000) gives the value for the default risk (\$75,000).

<sup>4</sup> For example, let’s suppose that a bank or FX broker purchases forward USD 1,000,000 from one of its clients at a rate of USD/CAD 1,0250 and that the delivery date is in 6 months. If, at the time the client defaults, the market rate of exchange is USD/CAD 1,0935, the bank/broker will need to spend CAD 68,500 more than expected to obtain this amount of U.S. dollars through the FX market.





To manage this risk, FX brokers often require the exporter to provide a deposit as guarantee. Bankers, on the other hand, will often subtract the amount of the default risk from their client's total approved credit, usually by freezing the client's line of credit by an amount equal to the default risk. This reduces the company's borrowing capacity – a situation that can be reversed using EDC's Foreign Exchange Facility Guarantee (see box below).

### EDC'S FOREIGN EXCHANGE FACILITY GUARANTEE



EDC can provide an [Foreign Exchange Facility Guarantee](#) (FXG) that will guarantee the collateral required by many banks and FX brokers for the purchase or sale of FX contracts. By freeing your balance sheet from this collateral requirement, the FXG frees up funds that can be used to pursue new business opportunities.

The FXG is a 100% irrevocable and unconditional guarantee. It is issued on a facility basis, so EDC does not require the exporter to declare the activities covered by the FXG during the validity period. This period is generally set at one year and is renewable annually. The FXG applies to FX contracts that:

- ▶ are entered into during the FXG's validity period, or that were entered into earlier but have not yet reached their due date; and
- ▶ do not exceed the maximum FX contract term specified in the FXG certificate. Maximum contract terms can be 12, 24 or 36 months.

## MANAGING SETTLEMENT DATES WITH FX SWAPS

You may find it difficult to choose – sometimes far in advance – the settlement date for a FX forward contract. As we have seen, FX risk usually arises well before you know the date when you will collect your export earnings.

When you purchase FX coverage, however, you have to select a settlement date, which is the date on which currencies will be exchanged. By selecting this date, you are making a commitment to your bank or FX broker that you will pay a specific amount of foreign currency on that date, even though you can't be sure today that you'll have the foreign currency to do so at that point in time.

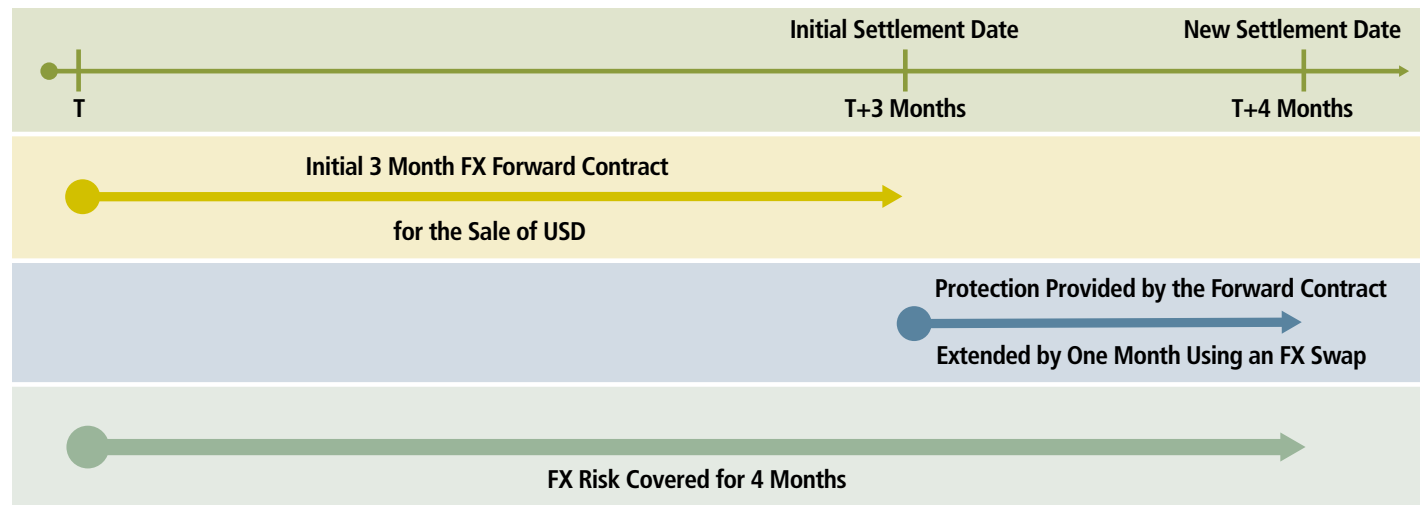
This may seem like a risky commitment. In fact, it is quite easy to manage situations where you do not receive foreign currency payments when expected. If you don't have enough foreign funds to settle an FX forward contract on the settlement date, you can simply push out the settlement date by means of an *FX swap*. This technique is both straightforward and widely used.

To see how a swap works, consider again the example of BEDM Systems. The company's FX position (see Table 2) shows that the business has FX forward contracts for a total of USD 5.4 million. Let's assume that one of the contracts, for USD 1 million, was concluded with a three-month due date. On the due date, BEDM has not yet received the U.S. dollars needed to settle its contract. To deal with this, it uses an FX swap to move the settlement date to a later date. The FX swap allows BEDM to keep its FX coverage fully in place. Chart 3 shows how the situation evolves using the swap.





Chart 3: Using an FX Swap to Extend a Settlement Date



### HOW AN FX SWAP WORKS

The swap is made up of two simultaneous transactions: first, BEDM buys, through an FX spot transaction, the U.S. dollars that it does not have but must deliver; second, it resells U.S. dollars on a forward basis for settlement on a date that corresponds to the company's updated collection forecast (one month later, in this example).<sup>5</sup> Using swaps means that BEDM can cover its FX risk from the moment it appears, without having to worry about when it will get paid by its foreign customers.

Note that, contrary to FX forward contracts and FX options, FX swaps **are not** hedging instruments since they do not transfer FX risk from your company to a bank or FX broker.

### FX SWAPS AND NATURAL HEDGING

If a company pays its invoices and collects its export revenue in the same currency, it is said to be using “natural hedging” to manage its FX risk. However, collections and disbursements in the same foreign currency rarely come due on the same date – there is generally a gap that can range from a few days to several months.

<sup>5</sup> An FX swap can also be used to accelerate a settlement date if a foreign currency payment is received earlier than anticipated. In this situation, the exporter will sell foreign currency by way of an FX spot transaction and repurchase the same currency on the settlement date associated with the original FX forward contract.



If your company is in this situation, the FX swap is an effective way of filling the gap. Further, FX swaps make it possible to temporarily convert foreign-currency cash balances into CAD without any FX risk. This increases the availability of CAD funds, which can help you manage your cash and short-term debt.

## THE FX HEDGING RATIO

The FX hedging ratio is the percentage of FX coverage compared to the company's FX position. A 100% ratio indicates that the FX position is completely covered. A lower ratio indicates that a portion of the FX risk is not hedged and, consequently, that the exporter can tolerate a certain degree of risk. The exporter might do this to take advantage of a favourable movement in exchange rates, for example.

Determining the coverage ratio should be done carefully since an effective hedging strategy does not necessarily require a 100% ratio. However, simplistic formulas such as "businesses should cover 50% of their FX risk," should be avoided. Each company is unique and should analyze its hedging needs according to its individual requirements and capabilities. The decision to set the hedging ratio below 100% should, consequently, be based on a detailed analysis of the potential financial losses to which the business is exposed. Table 3 extends the sensitivity analysis developed for BEDM Systems in Table 1 to show the effects of various hedging ratios on the company's profit margin per unit.

Table 3. **BEDM's Profit Margin Based on Various FX Hedging Ratios**

| USD/CAD<br>Exchange<br>Rate | Unit<br>Price<br>in USD | Revenue<br>in CAD | FX Gain/<br>Loss in<br>CAD | Profit<br>Margin<br>in CAD | Profit Margin (Percentage) for Various Hedging Ratios<br>with the Hedge Locked in at a Rate of USD/CAD 1.0525 |             |             |             |             |
|-----------------------------|-------------------------|-------------------|----------------------------|----------------------------|---|-------------|-------------|-------------|-------------|
|                             |                         |                   |                            |                            | 0%  | 50%         | 65%         | 80%         | 100%        |
| 1.1600                      | \$95.00                 | \$110.20          | \$10.20                    | \$33.28                    | 43.3  | 36.6        | 34.6        | 32.6        | 30.0        |
| 1.1200                      | \$95.00                 | \$106.40          | \$6.40                     | \$29.48                    | 38.3  | 34.2        | 32.9        | 31.7        | 30.0        |
| 1.0800                      | \$95.00                 | \$102.60          | \$2.60                     | \$25.68                    | 33.4  | 31.7        | 31.2        | 30.7        | 30.0        |
| <b>1.0525</b>               | <b>\$95.00</b>          | <b>\$100.00</b>   | <b>\$0.00</b>              | <b>\$23.08</b>             | <b>30.0</b>   | <b>30.0</b> | <b>30.0</b> | <b>30.0</b> | <b>30.0</b> |
| 1.0400                      | \$95.00                 | \$98.80           | (\$1.20)                   | \$21.88                    | 28.5  | 29.2        | 29.4        | 29.7        | 30.0        |
| 1.0000                      | \$95.00                 | \$95.00           | (\$5.00)                   | \$18.08                    | 23.5  | 26.7        | 27.7        | 28.7        | 30.0        |
| 0.9600                      | \$95.00                 | \$91.20           | (\$8.80)                   | \$14.28                    | 18.6  | 24.3        | 26.0        | 27.7        | 30.0        |
| 0.9200                      | \$95.00                 | \$87.40           | (\$12.60)                  | \$10.48                    | 13.6  | 21.8        | 24.3        | 26.7        | 30.0        |



Table 3 shows that by immediately hedging its FX risk, BEDM can reduce the volatility in its profit margins caused by exchange rate fluctuations. The five columns on the right show the effects of various hedging ratios when the FX hedge rate (that is, the exchange rate at which BEDM is assured of selling its U.S. currency) is equal to the reference rate of USD/CAD 1.0525.

Ultimately, senior management is responsible for determining what constitutes an acceptable level of exposure to FX risk. To make this determination,

senior managers should focus both on current attitudes toward FX risk and financial information such as the data contained in Tables 1 and 3.

## APPROACHES TO FX HEDGING

There are two main ways of setting up FX hedges: the systematic approach and the progressive approach.

### SYSTEMATIC HEDGING

With systematic hedging, you cover your risk immediately after you have calculated your FX position and determined your hedging ratio.

### PROGRESSIVE HEDGING

With progressive hedging, you don't immediately cover your risk but instead establish a risk tolerance threshold. This is an exchange rate beyond which you automatically put FX coverage in place. When using this approach, you accept exposure to a certain amount of risk in the hope of benefiting if the exchange rate moves in your favour.

To do this, you establish a loss threshold and calculate the exchange rate you can tolerate before FX losses become unacceptable. If the rate reaches this level, you immediately put FX coverage in place. Conversely, you can also establish a profit threshold. If the rate reaches this level, thus increasing your profits, you immediately put FX coverage in place to lock in your gains.

### ESTABLISHING YOUR COMPANY'S RISK TOLERANCE

Risk tolerance and the consequent choice of a hedging ratio shouldn't be based solely on financial calculations. From one company to another, business owners and senior management do not share the same perspectives on risk in general and FX risk in particular.

Some companies see exchange rate fluctuations as opportunities for financial gains and may decide to factor this vision into their hedging strategy. It should be stressed, however, that attempting to profit in this way means that an exporter must regularly "beat the market" – something that is a challenge to accomplish, even for FX experts.

Trying to generate additional income through currency fluctuations necessarily involves the risk of losing money. For this reason, management should be wary of hedging strategies that concentrate on using exchange rate movements to boost profits. This is especially true when the accompanying financial risks have not received careful consideration.



To use the progressive approach successfully, you must carefully quantify the financial risk you are prepared to accept, using the types of profit sensitivity analyses shown in Tables 1 and 3. This approach requires very strict discipline and must include mechanisms to ensure that FX coverage is put in place as soon as the tolerance threshold is reached.

### SOLUTIONS OTHER THAN HEDGING INSTRUMENTS

In addition to the hedging instruments provided by banks and FX brokers, there are several other methods that exporters use to manage FX risk. These include natural hedging, transfer of risk to the buyer, invoicing in Canadian dollars and raising the export selling price. As we will see, none of these solutions is without flaws and they cannot fully replace an effective use of hedging instruments.

#### NATURAL HEDGING

A company that pays its invoices and collects its export revenue in the same currency is said to be using natural hedging to manage its FX risk. In many situations, natural hedging occurs on its own, such as when you price a product in a foreign currency and invoice at least part of your production costs in the same currency. In other situations, natural hedging is the result of a strategic decision on your part. An example would be favouring suppliers who invoice their products or services in the currency in which you'll collect foreign sales revenues.

Another form of natural hedging is to borrow in the currency in which most of your export sales are paid. These foreign currency receipts can then be used to make loan repayments. The latter reduce your FX position in the same way as accounts payable and other financial obligations in a foreign currency.

Natural hedging has considerable advantages when exchange rate fluctuations are unfavourable, but it also limits your ability to profit from favourable fluctuations. To fully benefit from natural hedging, moreover, you should account for its effects on the cost, in CAD, of company disbursements in foreign currency (in other words, it should be profitable for you to “self-supply” this currency).

#### TRANSFERRING FX RISK TO THE BUYER

Contract provisions that transfer risk to the buyer are unusual, since buyers are rarely receptive to such measures and generally will not agree to them unless they have no other choice.

Risk-sharing provisions are a little more common (but still the exception) and are found where the exporter and the importer agree to split the financial consequences of exchange rate movements. These provisions are not a form of exchange rate coverage, however, and at best provide partial protection against losses. In addition, they are often insufficiently detailed in the contract and thus difficult to interpret and implement.



### INVOICING IN CANADIAN DOLLARS

Foreign buyers are rarely willing to pay your invoices in Canadian dollars, since doing so simply transfers FX risk to them. If the foreign company is a poor FX risk manager, this may increase its purchasing costs even if you don't raise your prices. If you insist on being paid in Canadian currency, the foreign company may also soon be looking for other suppliers. Billing in Canadian dollars thus presents no genuine advantages. You are usually better off to discard this approach and learn how to effectively identify, measure and manage FX risk instead.

### RAISING THE EXPORT SELLING PRICE

To use this strategy, you raise your selling price in the foreign currency to offset a possible depreciation of this currency's value against the Canadian dollar. Adjusting prices in this way is not a true hedge against FX risk and cannot act as a substitute for FX hedging instruments. Some Canadian exporters have learned this the hard way in recent years due to the high volatility of exchange rates.

If your company is able to raise its prices to offset a potential depreciation of a foreign currency, then you hold some pricing power. This pricing power is a competitive advantage worth protecting against FX risk. In this context, consider the example of BEDM again. As we saw in Table 1, the company is selling its product in the United States for USD 95.00 per unit, based on a reference rate of USD/CAD 1.0525. Let's imagine that BEDM finds that it has some pricing power and is able to raise its export price to USD 100.00 per unit.

By hedging all its FX risk immediately after raising its price, BEDM ensures that it will receive CAD 105.25 per unit sold ( $\text{USD } 100.00 \times 1.0525$ ), thus realizing a 36.8% profit margin. Since the profit margin was 30% when the selling price was USD 95.00 per unit, the additional 6.8% represents a 23% increase in profit resulting from the new, higher price. A company's ability to raise export prices is therefore a valuable business advantage that shouldn't be wasted by neglecting the management of FX risk.



## CHAPTER 4: FORMULATING AN FX POLICY

In the first three chapters of this Guide, we identified and analyzed the key parameters of FX risk management. In this last chapter, we will illustrate how to formulate an FX policy by using, once more, our example of BEDM Systems.

Crafting an FX policy is an opportunity for you to define, in a proactive way, the key values to assign to the four parameters that underpin any effective FX risk management program. Once you have detailed these parameters, you will have formulated a basic FX policy for your company. Given the FX policy's potential impact on your profitability and cash flow, it is important that it be approved by both your senior management and your Board of Directors.

### FX POLICY STATEMENT

BEDM identifies its FX risk management parameters in its FX policy statement, as presented in Table 4.

Table 4. **BEDM's FX Policy Statement**

| BEDM Systems Inc. – FX Policy Statement<br>Effective from January 1 to December 31, 2012 |   |
|--|---|
| <b>Reference Rate</b> (Parameter 1)  | USD/CAD 1.0525  |
| <b>Time Horizon</b> (Parameter 2)  | 12 months   |
| <b>FX Position</b> (Parameter 3)   | USD 12,515,000 as of January 1, 2012  |
| <b>Hedging Strategy</b> (Parameter 4)  | The strategy includes the following:<br>1. Hedging instruments: FX forward contracts only<br>2. Hedging ratio: 80% (sale of USD 10 million)<br>3. Hedging approaches: <ul style="list-style-type: none"><li>• Systematic hedging: 50%, immediate sale of USD 5 million at the rate of USD/CAD 1.0525</li><li>• Progressive hedging: 50%, deferred sale of USD 5 million at a loss threshold rate of USD/CAD 1.0000, or a profit threshold rate of USD/CAD 1.1200, whichever occurs first.</li></ul> |





## FX POLICY DETAILS

The details of BEDM's hedging strategy, as summarized in the above table, are as follows:

- ▶ It excludes the use of FX options and concentrates on FX forward contracts.
- ▶ FX risk is not fully covered. The selected hedging ratio is 80%, which indicates that BEDM is willing to tolerate some FX risk. It also implies that the company has measured the risk associated with partial hedging and has found it acceptable.
- ▶ BEDM's coverage uses a combination of systematic and progressive hedging. Using progressive hedging, BEDM links the implementation of 50% of its FX coverage to future exchange rate fluctuations. This means that BEDM hopes that these future fluctuations will be favourable and will add to the company's profits.
- ▶ The profit threshold exchange rate set by the company is USD/CAD 1.1200. If the rate hits this level, the company will realize an FX gain of \$6.40 per unit sold when purchasing its FX forward contracts.<sup>6</sup>
- ▶ Conversely, there is a loss threshold of USD/CAD 1.0000. If the rate reaches this level, BEDM will suffer an FX loss of CAD 5.00 per unit sold when it purchases FX coverage. The company established this threshold by analyzing the financial consequences of a range of potential exchange rate shifts.
- ▶ The decision to use a progressive hedging approach implies that BEDM has the time and resources to closely follow FX markets and is disciplined enough to put coverage in place as soon as the rate reaches either threshold.

<sup>6</sup> This gain is calculated in Table 1. It raises the profit margin per unit from CAD 23.08 to CAD 29.48, but only for 40% of the total units sold. Recall that 80% of BEDM's total FX exposure is to be hedged and that half of this exposure will be covered through progressive hedging. Recall as well that FX exposure related to the other half, representing another 40% of units sold, will be immediately hedged at the rate of USD/CAD 1.0525 in order to lock in a margin of CAD 23.08. For these units, BEDM makes no FX gain, but cannot suffer an FX loss either. Finally, 20% of the company's FX exposure is unhedged. This means that the profit margin for 20% of units sold will only be established in the future when BEDM sells the U.S. dollars related to these units through FX spot transactions.

# CONCLUSION

The growth opportunities in world markets – and particularly in emerging market – are more promising than ever for Canadian companies. As our exporters know, however, the global competition for these opportunities is strong, and a company that wishes to operate on an international scale must increase its competitiveness in every way it can. One way of giving your company a competitive edge is to improve its management of FX risk.

As this guide demonstrates, developing and implementing a simple but effective FX policy is within the reach of all Canadian exporters. To help in doing so, they should seek to proactively manage foreign currency receipts and disbursements and be ready to abide by FX strategies that accurately reflect their companies' operations and needs. They should also aim to mitigate FX risk as soon as it appears and pay close attention to the four basic parameters of FX risk management.

Achieving all this requires upgrading the company's skill sets and investing enough time to identify and analyze the FX risks the company faces. Doing so will enable the business to develop appropriate responses and to better integrate FX risk management throughout its operations. Once a company has done this, it can realistically expect to increase its foreign sales without seeing its profit margin and cash flow eroded by the vagaries of the foreign exchange market.



# GLOSSARY

**Bidding period** – A period during which the company's FX risk is characterized by unconfirmed cash flows.

**Confirmed cash flows** – Confirmed commitments to receive or pay foreign currency at some point in the future.

**FX position** – The difference between the amounts held and to be received in a foreign currency, versus the amounts due in the same currency.

**FX risk** – The risk related to the impact of exchange rate fluctuations on the company's profit margin. It arises from the possibility that an unfavourable fluctuation in the exchange rate causes the company to receive an amount in Canadian dollars that is less than initially expected.

**FX swap** – A temporary exchange of currency between the company and its banker or broker. An FX swap does not impact the company's FX position.

**Hedging operation** – An FX transaction, entered into with a banker or broker, for the purpose of reducing the company's FX position.

**Hedging ratio** – A percentage indicating the company's desired proportion of FX coverage compared to its FX position.

**Natural hedging** – Disbursements in a foreign currency that help reduce the company's FX position.

**Operating cycle** – A period of time that starts with the setting of prices in a foreign currency and ends with collecting payment in the currency.

**Reference rate** – The exchange rate that is used to calculate export selling prices. The reference rate must not be confused with the budget rate found on financial statements.

**Spot FX transaction** – Purchase or sale of a foreign currency for immediate settlement.

**Term FX transaction** – The purchase or sale of a foreign currency for settlement at a later date.

**Time horizon** – The period during which the company undertakes to keep the same selling price for foreign buyers despite fluctuations in the exchange rate.

**Unconfirmed cash flows** – Foreign currency payments or receipts that the company expects, with a reasonable degree of certainty, to become confirmed within the time horizon of its FX policy.

Ce document est également disponible en français.